Overview of what's in 802.1AB-d0

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Document Creation

- Base text taken from LLDP submission v3
- Reformatted to 802 guidelines (but using Word)
- Very close to 802.1 conventions, and will be modified to better align as needed.
- To be converted to Frame for November meeting
- Issues to discuss…

Issue #1: Protocol Name

- LLDP stands for Link-Layer Discovery Protocol
- Doesn't match any of the wording of the PAR
- Suggest one of the following:
  - SMDP – station and MAC discovery protocol
  - SCDP – station connectivity discovery protocol
  - CDP – connectivity discovery protocol - ☺

Issue #2: Scope

- Current wording is exactly from the PAR. Doesn’t sufficiently explain what will and will NOT be covered
- Need to keep same ‘context’ as PAR words
- Itemized list may better cover the scope

Proposed Scope Items

- This document defines a standard discovery protocol that:
  - Advertises network management information about the local station to adjacent stations on the same physical LAN/MAN.
  - Receives network management information from adjacent stations on the same physical LAN/MAN.
  - Operates with all IEEE 802 access protocols and network media.
  - Establishes a network management information base and managed objects that are suitable for storing device connection information about adjacent stations in a given management domain.
  - Provides compatibility with the IETF RFC 2922 PTOPO management information base.
  - Provides a means to detect certain miss-configurations that may impair station communication.

Note: While the Link Layer Discovery Protocol may operate with non-IEEE 802 access protocols and network media, such operation is beyond the scope of this standard.

Issue #3: Purpose

- Current wording is exactly from the PAR. It could better describe why the project is needed.
- Need to keep same ‘context’ as PAR words
- Itemized list may better cover the scope

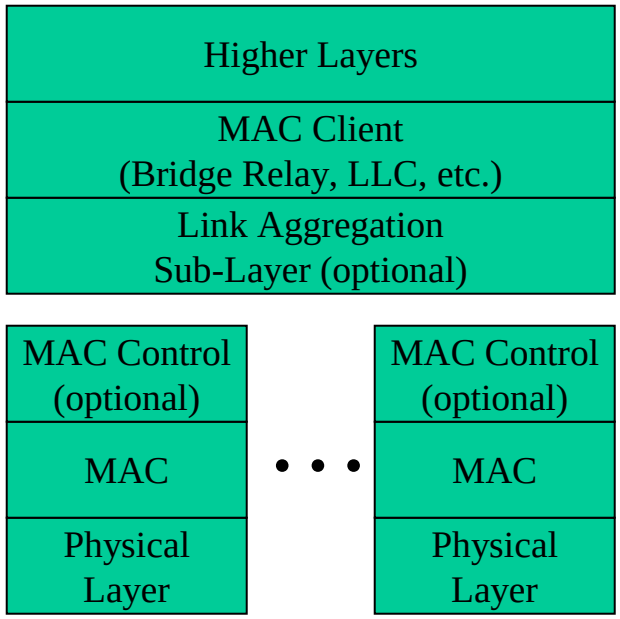
Proposed Purpose Items

- The purpose of this document is to provide a standardized way of discovering and representing the physical network connections pertaining to a given network management domain. To this end, it:
  - Increases the likelihood of multi-vendor interoperability of such physical topology management information.
  - Makes it possible to discover certain configuration inconsistencies or assumptions that may result in impaired communication or network malfunction at higher layers.
  - etc…

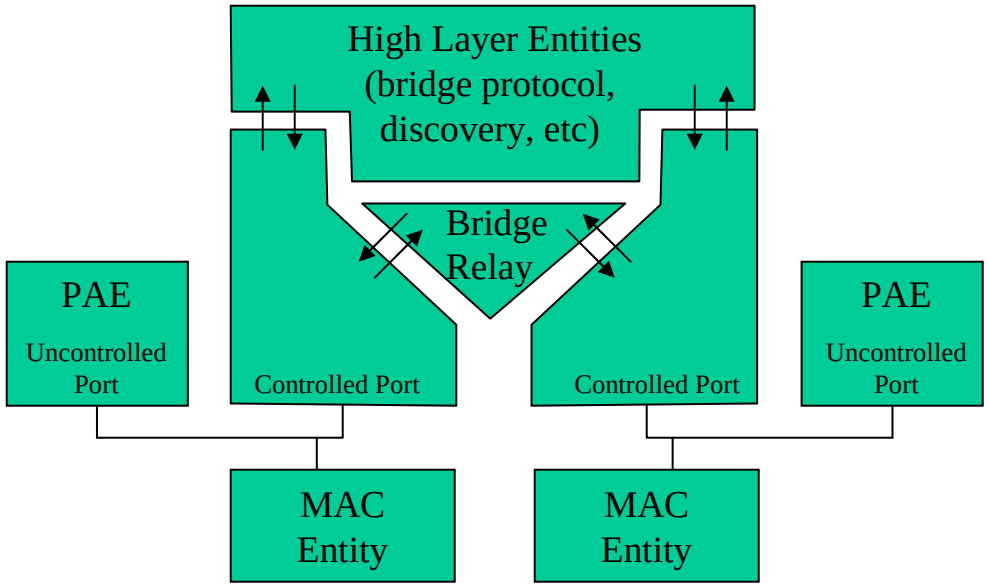
Issue #4: Architectural Fit

- Protocol runs over the controlled port
- Currently protocol must run over physical port of an aggregation, but may run over the aggregation as well.
- Previous discussion discouraged running over an aggregation
- Consider the following diagrams

Some thoughts on architectural models



From 802.3 Fig 43-1

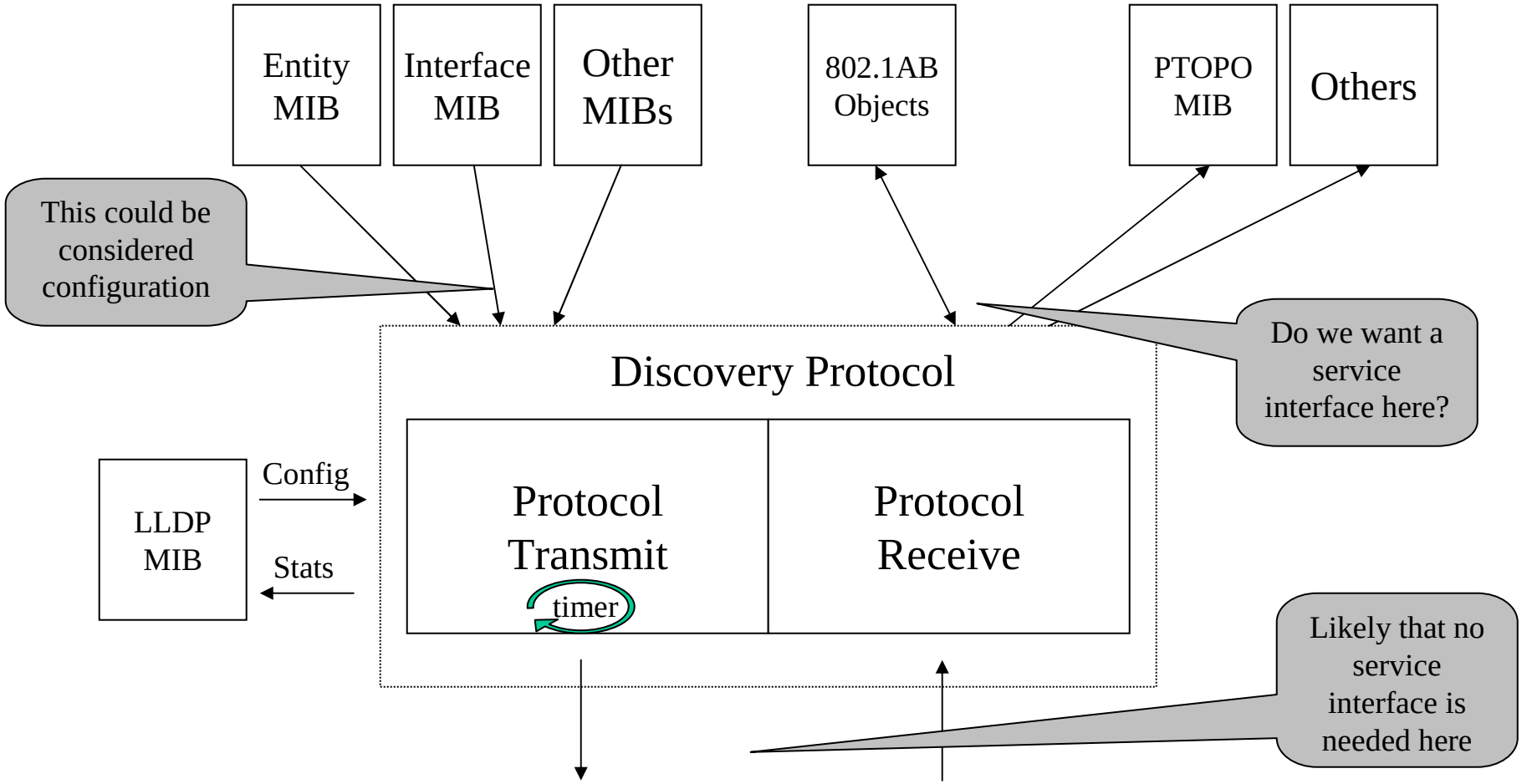


Modified Fig 7-3 From 802.1D

Issue #5: Service Description

- Are interface service descriptions necessary?
- We don’t use them to transmit and receive frames in EAPOL, LACP, GARP, etc
- However, the protocol provides a service to advertise and receive discovery attributes
- Could this just be a management interface?
- Consider the following diagram:

High-Level Operation



Issue #6: Management Specification

- Do we need a classic management clause plus a MIB, or just the MIB?
- For example: 802.1X has both clauses

Assumption: Both

Issue #7: Addition of 802.1AB Discovery MIB

- PTOPO doesn't have all the object we wish to exchange
- State machines for managing information advertised and received are not specified
- Suggest adding clauses for "Discovery object management and control"
  - Includes state machines for handling received information
  - Potentially includes service interfaces for PTOPO and other users of discovery information.
- Suggest adding MIB clause for above.

Other immediate document work items

- Redraw figures to align with 802.1 conventions
- Separate capabilities vector into a pure capabilities vector and a current state vector
- Define structure for vendor specific attributes.